

Monsanto

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POLYMER PRODUCTS COMPANY

Nitro, West Virginia 25143

Phone: (304) 755-3341

April 10, 1985

Dr. Walter Lee
U. S. Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, PA 19017

Dear Dr. Lee:

We have completed the remedial investigation described in our work plan for the Monsanto, Nitro Landfill. A detailed description of the work performed and results is included for your review. Table I summarizes the analytical results and Figure I identifies each sample point location.

It is significant to note that the samples taken in our active area were all non-detected. In all, fourteen samples were non-detected including the field blank. All the samples in the inactive area were taken below the surface. There were four positive results, of these, the highest sample point (No. 13) taken at a depth of 21" to 25" below the surface was 10.7 ppb. This sample location was near NUS sample point 1B, which also was found to be at 10 ppb (sampled 9/17/84). Sample point No. 17 was found to be 6.66 ppb. This sample was of fly ash used to construct a dike around the site prior to the installation of a fence. Sample points No. 8 and 11 were 1.71 ppb and 2.09 ppb, respectively. Both of these were 21" to 24" below the surface.

We feel these results confirm our belief that there is not a dioxin concern at either our present active site or our inactive site that was capped in 1980 with two feet of impervious clay. However, in an effort to remove any doubt as to the presence of dioxin on the surface, we will take surface samples at each point where positive results were found (sample points No. 8, 11, 13, and 17) and a surface sample of Santoquin residue.

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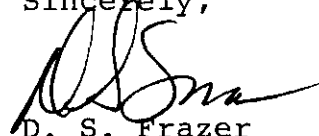
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These samples will be taken on 4/11/85. Results from the analysis should be available by the end of April. At that point, our intent is to write a feasibility study for remedial action at the site.

If you have any questions, please contact Keith Miller.

Sincerely,



D. S. Frazer
Plant Manager

sa

Attachments

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TABLE I

Results 2,3,7,8-TCDD Testing
Monsanto Non-Hazardous Waste Landfill
(Samples Taken on March 6, 1985)

<u>Sample Location (see map)</u>	<u>Results (ppb 2,3,7,8-TCDD)</u>
1	ND
2	ND
3	ND
4	ND
5	ND
6	ND
7	ND
8	1.71
9	ND
10	ND
11	2.09
12	ND
13	10.7
14	ND
15	ND
16	ND
17	6.66
18	ND

ND = Non-Detected

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A coring tube was placed in each hole (sampling points 5-17) and was driven down 12 inches with a sledge hammer. (Note: All coring tubes used in the study were manufactured by Monsanto and were cleaned by the above methods). The location of the core in relation to the wooden hub marking each sampling point was also recorded in the field notebook. In several cases, impenetrable material was encountered and the tube could not be driven the full 12 inches. A note was made of the actual depth of the core sample. Upon removal, the tube was securely taped closed and labeled with a code number corresponding to the sampling point. The tube was then placed in a zip-lock plastic bag. Surface cores, also 12 inches deep, were taken at the active landfill (points 1-4) and were treated as above for shipment. A sample blank was produced on site by filling an empty coring tube with soil of a known origin. The blank was given a sample I.D. number and was packaged as above.

Tubes were packaged for shipment in 2 picnic coolers each containing 9 tubes along with chain of custody forms. Coolers were addressed to the attention of Roy Noble of the Dayton Lab.

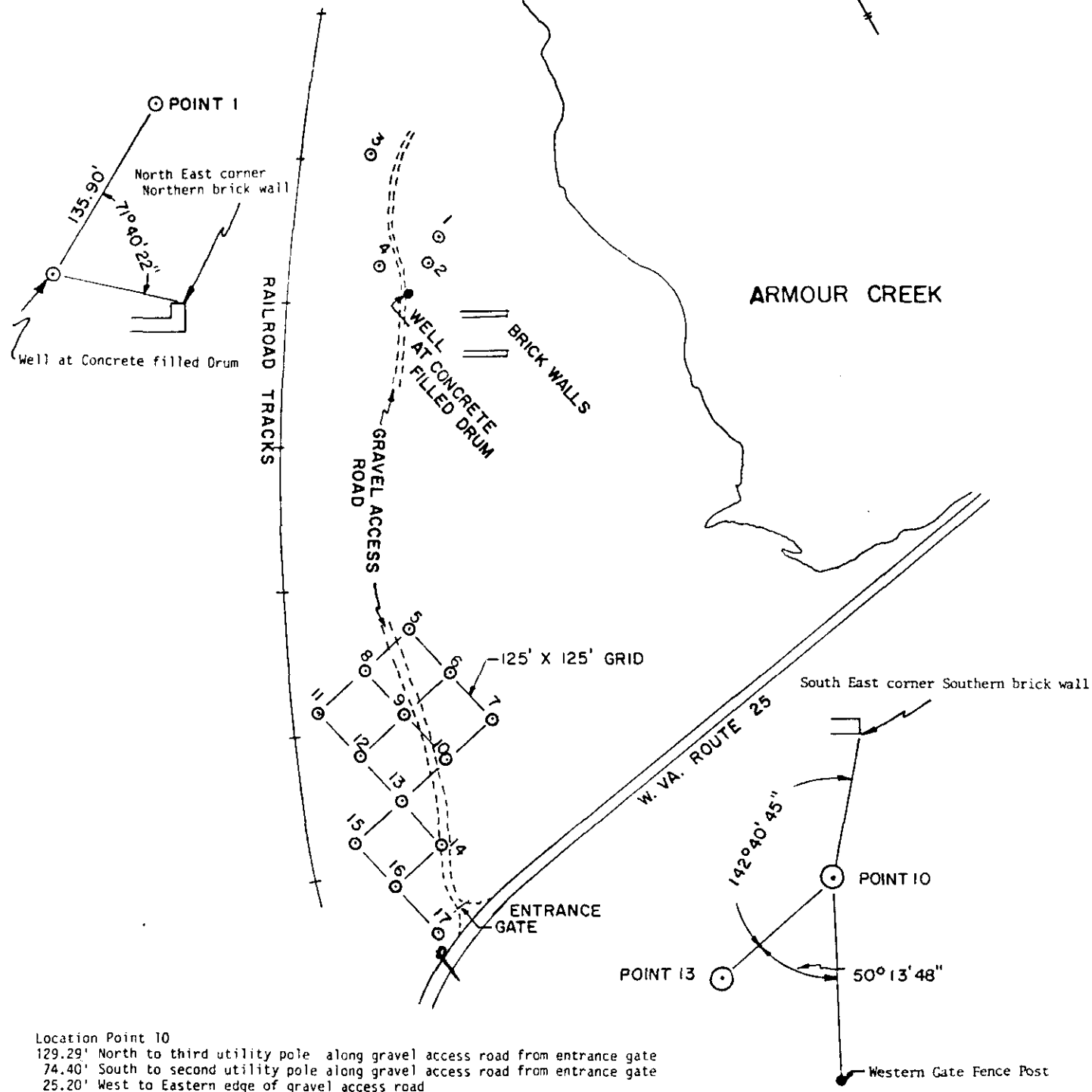
Figure I

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Sample Point	Angle formed by Sample Pt.-Ref.Pt.-NE corner Northern brick wall	Distance from Ref. Pt.
1	71° 40' 22"	135.90'
2	68° 22' 11"	74.26'
3	116° 30' 30"	294.99'
4	147° 05' 50"	82.52'

Reference Point used was well at concrete filled drum.



DATE: MARCH 1985

SCALE: 1" = 300'

DR: TBC

CK: CAL

DWG. NO. 85018N-1

MONSANTO - LANDFILL

ACKENHEIL & ASSOCIATES, WEST VIRGINIA, INC.
CONSULTING ENGINEERS

SAMPLE
POINT
LOCATIONS

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NITRO LANDFILL REMEDICAL INVESTIGATION DETAILS

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The following report summarizes activities and results of the Remedial Investigation at the Nitro Non-Hazardous Waste Landfill. The purpose of sampling was to obtain soil core samples below a two foot deep clay cap covering the landfill. Samples were then shipped to Monsanto's Dayton Laboratory for 2,3,7,8-TCDD analysis. The results of the analyses are summarized in Table I, sample locations can be found in Figure I. The analytical report of the results is also included.

On March 6, 1985, Robert Mosher and Charles Staples of the Environmental Science Center arrived to collect samples at the landfill located on Route 25 north of the plant. Dr. Walter Lee, a representative of USEPA Region III was on hand to observe the sampling process. Mr. Don Phillips, a Nitro plant employee, provided assistance in the sampling.

A surveying firm had marked the position of seventeen sampling points at the landfill prior to sampling (see Figure I). Each point was marked by a wooden "hub" and was accompanied by a labeled stake. Measurements taken from reference objects accurately describe these points. Four sampling points were located in the active areas of the landfill where surface core samples were to be taken. Within the inactive, clay capped area, thirteen points were located on a 125 x 125 ft. grid. Within a few feet of each of these points, a hole had been hand dug by plant personnel. Holes measured 18 to 22 inches deep and between 2 and 2.5 feet in diameter. The purpose of the holes was to remove the clay cap and expose the underlying soil for sampling.

Immediately before taking a core sample from the holes in the active area of the landfill, each hole was deepened by digging with a garden trowel. This prevented possible cross-contamination of sample points from the picks and shovels used to dig the holes. A separate trowel was used for each sample. Trowels were cleaned prior to use according to ESC Standard Operating Procedure ESC-95-SOP-046 except that they were not baked.

In several cases, it was not practical to remove material to a depth of 24 inches due to extremely hard packed soil-residue conditions. In these cases, troweling was used to remove at least an inch of material but was stopped when it was apparent that the hole was below the level of the clay cap. The depth of the hole was then recorded in the field notebook.